

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141

ATTY. DOCKET NO.: C1037.70049US00

FILING DATE: August 18, 2003

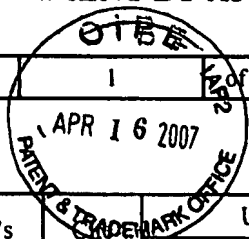
CONFIRMATION NO.: 3287

APPLICANT: Hutcherson et al.

GROUP ART UNIT: 1643

EXAMINER: David Harold Humphrey

Sheet 1 of 11

**U.S. PATENT DOCUMENTS**

Examiner's Initials #	U.S. Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication or Issue of Cited Document MM-DD-YYYY
	No.	Number	Kind Code		
/AMG/		5,087,617		Smith	02-11-1992
		5,093,318		Goodman et al.	03-03-1992
		5,567,604		Rando et al.	10-22-1996
		5,576,302		Cook et al.	11-19-1996
		5,594,122		Friesen	01-14-1997
		5,658,891		Draper et al.	08-19-1997
		5,665,580		Crooke et al.	09-09-1997
		5,681,944		Crooke et al.	10-28-1997
		5,684,147		Agrawal et al.	11-04-1997
		5,728,518		Carmichael	03-17-1998
		5,843,770		Ill et al.	12-01-1998
		5,854,418		Chang et al.	12-29-1998
		5,856,462		Agrawal	01-05-1999
		5,858,987		Beer-Romero et al.	01-12-1999
		5,932,556		Tam	08-03-1999
		5,955,059		Gilchrest et al.	09-21-1999
		5,985,662		Anderson et al.	11-16-1999
		6,013,639		Peyman et al.	01-11-2000
		6,107,062		Hu et al.	08-22-2000
		6,184,369	B1	Rando et al.	02-06-2001
		6,221,882		Macfarlane	04-24-2001
		6,399,630		Macfarlane	06-04-2002
		6,426,334	B1	Agrawal et al.	07-30-2002
		6,479,504		Macfarlane et al.	11-12-2002
		6,498,147	B1	Nerenberg et al.	12-24-2002
		6,503,533	B1	Korba et al.	01-07-2003
		6,521,637		Macfarlane	02-18-2003
		6,558,670	B1	Friede et al.	05-06-2003
		6,610,308		Haensler	08-26-2003
		6,727,230	B1	Hutcherson et al.	04-27-2004
		6,737,066	B1	Moss	05-18-2004
/AMG/		6,821,957	B1	Krieg et al.	11-23-2004

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	2	of	11
-------	---	----	----

/AMG/		6,835,395	B1	Semple et al.	12-28-2004
		6,943,240		Bauer et al.	09-13-2005
		6,949,520		Hartmann et al.	09-27-2005
		6,951,845		Carson et al.	10-04-2005
		7,001,890		Wagner et al.	02-26-2006
		2001-0041681	A1	Phillips et al.	11-15-2001
		2002-0091097	A1	Bratzler et al.	07-11-2002
		2002-0164341	A1	Davis et al.	11-07-2002
		2003-0026801	A1	Weiner et al.	02-06-2003
		2003-0027782	A1	Carson et al.	02-06-2003
		2003-0050261	A1	Krieg et al.	03-13-2003
		2003-0050268	A1	Krieg et al.	03-13-2003
		2003-0091599	A1	Davis et al.	05-15-2003
		2003-0100527	A1	Krieg et al.	05-29-2003
		2003-0139364	A1	Krieg et al.	07-24-2003
		2003-0148316	A1	Lipford et al.	08-07-2003
		2003-0148976	A1	Krieg et al.	08-07-2003
		2003-0181406	A1	Schetter et al.	09-25-2003
		2003-0191079	A1	Krieg et al.	10-09-2003
		2003-0203861	A1	Carson et al.	10-30-2003
		2003-0212026	A1	Krieg et al.	11-13-2003
		2003-0224010	A1	Davis et al.	12-04-2003
		2003-0232074	A1	Lipford et al.	12-18-2003
		2003-0232856	A1	Macfarlane	12-18-2003
		2004-0006010	A1	Carson et al.	01-08-2004
		2004-0006032	A1	Lopez	01-08-2004
		2004-0009944	A1	Tam et al.	01-15-2004
		2004-0009949	A1	Krieg	01-15-2004
		2004-0030118	A1	Wagner et al.	02-12-2004
		2004-0038922	A1	Haensler et al.	02-26-2004
		2004-0053880	A1	Krieg	03-18-2004
		2004-0067902	A9	Bratzler et al.	04-08-2004
		2004-0067905	A1	Krieg	04-08-2004
		2004-0087534	A1	Krieg et al.	05-06-2004
		2004-0087538	A1	Krieg et al.	05-06-2004
/AMG/		2004-0092468	A1	Schwartz et al.	05-13-2004

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	3	of	11
-------	---	----	----

/AMG/		2004-0092472	A1	Krieg	05-13-2004
		2004-0106568	A1	Krieg et al.	06-03-2004
		2004-0131628	A1	Bratzler et al.	07-08-2004
		2004-0132685	A1	Krieg et al.	07-08-2004
		2004-0142469	A1	Krieg et al.	07-22-2004
		2004-0143112	A1	Krieg et al.	07-22-2004
		2004-0147468	A1	Krieg et al.	07-29-2004
		2004-0152649	A1	Krieg	08-05-2004
		2004-0152656	A1	Krieg et al.	08-05-2004
		2004-0152657	A1	Krieg et al.	08-05-2004
		2004-0162258	A1	Krieg et al.	08-19-2004
		2004-0162262	A1	Krieg et al.	08-19-2004
		2004-0167089	A1	Krieg et al.	08-26-2004
		2004-0171150	A1	Krieg et al.	09-02-2004
		2004-0171571	A1	Krieg et al.	09-02-2004
		2004-0181045	A1	Krieg et al.	09-16-2004
		2004-0198680	A1	Krieg	10-07-2004
		2004-0198688	A1	Krieg et al.	10-07-2004
		2004-0229835	A1	Krieg et al.	11-18-2004
		2004-0234512	A1	Wagner et al.	11-25-2004
		2004-0235770	A1	Davis et al.	11-25-2004
		2004-0235774	A1	Bratzler et al.	11-25-2004
		2004-0235777	A1	Wagner et al.	11-25-2004
		2004-0235778	A1	Wagner et al.	11-25-2004
		2004-0247662	A1	Dow et al.	12-09-2004
		2004-0266719	A1	McCluskie et al.	12-30-2004
		2005-0004061	A1	Krieg et al.	01-06-2005
		2005-0004062	A1	Krieg et al.	01-06-2005
		2005-0009774	A1	Krieg et al.	01-13-2005
		2005-0013812	A1	Dow et al.	01-20-2005
		2005-0032734	A1	Davis et al.	02-10-2005
		2005-0032736	A1	Krieg et al.	02-10-2005
		2005-0037403	A1	Krieg et al.	02-17-2005
		2005-0037985	A1	Krieg et al.	02-17-2005
		2005-0043529	A1	Davis et al.	02-24-2005
/AMG/		2005-0049215	A1	Krieg et al.	03-03-2005

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	4	of	11
-------	---	----	----

/AMG/		2005-0049216	A1	Krieg et al.	03-03-2005
		2005-0054601	A1	Wagner et al.	03-10-2005
		2005-0054602	A1	Krieg et al.	03-10-2005
		2005-0059619	A1	Krieg et al.	03-17-2005
		2005-0059625	A1	Krieg et al.	03-17-2005
		2005-0064401	A1	Olek et al.	03-24-2005
		2005-0070491	A1	Krieg et al.	03-31-2005
		2005-0075302	A1	Hutcherson et al.	04-07-2005
		2005-0079152	A1	Bot et al.	04-14-2005
		2005-0100983	A1	Bauer et al.	05-12-2005
		2005-0101554	A1	Krieg et al.	05-12-2005
		2005-0101557	A1	Krieg et al.	05-12-2005
		2005-0119273	A1	Lipford et al.	06-02-2005
		2005-0123523	A1	Krieg et al.	06-09-2005
		2005-0130911	A1	Uhlmann et al.	06-16-2005
		2005-0148537	A1	Krieg et al.	07-07-2005
		2005-0169888	A1	Hartman et al.	08-04-2005
		2005-0171047	A1	Krieg et al.	08-04-2005
		2005-0181422	A1	Bauer et al.	08-18-2005
		2005-0182017	A1	Krieg	08-18-2005
		2005-0197314	A1	Krieg et al.	09-08-2005
		2005-0215500	A1	Krieg et al.	09-29-2005
		2005-0215501	A1	Lipford et al.	09-29-2005
		2005-0233995	A1	Krieg et al.	10-20-2005
		2005-0233999	A1	Krieg et al.	10-20-2005
		2005-0239732	A1	Krieg et al.	10-27-2005
		2005-0239733	A1	Jurk et al.	10-27-2005
		2005-0239734	A1	Uhlmann et al.	10-27-2005
		2005-0239736	A1	Krieg et al.	10-27-2005
		2005-0245477	A1	Krieg et al.	11-03-2005
		2005-0244379	A1	Krieg et al.	11-03-2005
		2005-0244380	A1	Krieg et al.	11-03-2005
		2005-0250726	A1	Krieg et al.	11-10-2005
		2005-0256073	A1	Lipford et al.	11-17-2005
		2005-0267057	A1	Krieg	12-01-2005
/AMG/		2005-0267064	A1	Krieg et al.	12-01-2005

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	5	of	11
-------	---	----	----

/AMG/		2005-0277604	A1	Krieg et al.	12-15-2005
		2005-0277609	A1	Krieg et al.	12-15-2005
		2006-0003955	A1	Krieg et al.	01-05-2006
		2006-0003962	A1	Ahluwalia et al.	01-05-2006
		2006-0019916	A1	Krieg et al.	01-26-2006
		2006-0019923	A1	Davis et al.	01-26-2006
		2006-0058251	A1	Krieg et al.	03-16-2006
		2006-0089326	A1	Krieg et al.	04-27-2006
		2006-0094683	A1	Krieg et al.	05-04-2006
		2006-0140875	A1	Krieg et al.	06-29-2006
		2006-0154890	A1	Bratzler et al.	07-13-2006
		2006-0172966	A1	Lipford et al.	08-03-2006
		2006-0188913	A1	Krieg et al.	08-24-2006
		2006-0211639	A1	Bratzler et al.	09-21-2006
		2006-0211644	A1	Krieg et al.	09-21-2006
		2006-0229271	A1	Krieg et al.	10-12-2006
		2006-0241076	A1	Uhlmann et al.	10-26-2006
		2006-0246035	A1	Ahluwalia et al.	11-02-2006
		2006-0286070	A1	Hartmann et al.	12-21-2006
		2006-0287263	A1	Davis et al.	12-21-2006
		2007-0009482	A1	Krieg et al.	01-11-2007
		2007-0010470	A1	Krieg et al.	01-11-2007
		2007-0037767	A1	Bratzler et al.	02-15-2007
		2007-0065467	A1	Krieg et al.	03-22-2007
		2007-0066553	A1	Krieg et al.	03-22-2007
		2007-0066554	A1	Krieg et al.	03-22-2007
/AMG/		2007-0078104	A1	Krieg et al.	04-05-2007

FOREIGN PATENT DOCUMENTS

Examiner's Initials #	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
/AMG/		WO	95/17507	A1	Biognostik Gesellschaft Für Biomolekulare Diagnostik MBH [DE]	06-29-1995	
/AMG/		WO	96/02560	A1	University of North Carolina at Chapel Hill	02-01-1996	
/AMG/		WO	96/24380	A1	ICN Pharmaceuticals	08-15-1996	

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.
include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	6	of	11
-------	---	----	----

/AMG/		WO	98/29430	A1	ICN Pharmaceuticals	07-09-1998	
		WO	98/49182	A2	Hybridon Inc.	11-05-1998	
		WO	98/49288	A1	Hybridon Inc.	11-05-1998	
		WO	99/33488	A2	SmithKline Beecham Biologicals S.A.	07-08-1999	
		WO	99/52549	A1	SmithKline Beecham Biologicals S.A.	10-29-1999	
		WO	99/56755	A1	University of Iowa Research Foundation	11-11-1999	
		WO	00/06588	A1	University of Iowa Research Foundation	02-10-2000	
		WO	00/67787	A2	The Immune Response Corporation	11-16-2000	
		WO	00/75304	A1	Aventis Pasteur [FR]	12-14-2000	Y-Abstract
		WO	01/62909	A1	Aventis Pasteur [FR]	08-30-2001	Y-Abstract
		WO	03/101375	A2	Immunotech SA	12-11-2003	
		WO	2004/007743	A2	Coley Pharmaceutical GmbH	01-22-2004	
		WO	2004/026888	A2	Coley Pharmaceutical GmbH	04-01-2004	
/AMG/		WO	2004/094671	A2	Coley Pharmaceutical GmbH	11-04-2004	

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials #	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
/AMG/		AGRAWAL et al., Medicinal chemistry and therapeutic potential of CpG DNA. Trends Mol Med. 2002 Mar;8(3):114-21.	
		AGRAWAL et al., Chapter 19: Pharmacokinetics and bioavailability of antisense oligonucleotides following oral and colorectal administrations in experimental animals. 1998: 525-43.	
		BATES et al., Antiproliferative activity of G-rich oligonucleotides correlates with protein binding. J Biol Chem. 1999 Sep 10;274(37):26369-77.	
		BISHOP et al., Intramolecular G-quartet motifs confer nuclease resistance to a potent anti-HIV oligonucleotide. J Biol Chem. 1996 Mar 8;271(10):5698-703.	
		CHACE et al., Bacterial DNA-induced NK cell IFN-gamma production is dependent on macrophage secretion of IL-12. Clin Immunol Immunopathol. 1997 Aug;84(2):185-93.	
		COHEN, Selective anti-gene therapy for cancer: principles and prospects. Tohoku J Exp Med. 1992 Oct;168(2):351-9.	
		COSSUM et al., Disposition of the 14C-labeled phosphorothioate oligonucleotide ISIS 2105 after intravenous administration to rats. J Pharmacol Exp Ther. 1993 Dec;267(3):1181-90.	
		CROOKE et al., Phosphorothioate Oligonucleotides. Therapeut Apps. 1995;ch5:63-84.	
		DIAMANTSTEIN et al., Specific binding of poly(I)-poly(C) to the membrane of murine B lymphocyte subsets. Eur J Immunol. 1978 Dec;8(12):896-9.	
		FILION et al., Development of immunomodulatory six base-length non-CpG motif oligonucleotides for cancer vaccination. Vaccine. 2004 Jun 23;22(19):2480-8.	
/AMG/		FULTZ et al., Transient increases in numbers of infectious cells in an HIV-infected chimpanzee following immune stimulation. AIDS Res Hum Retroviruses. 1992 Feb;8(2):313-7.	

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. include copy of this form with next communication to Applicant.

FORM PTO-1449/A and B (modified PTO/SB/08) INFORMATION DISCLOSURE STATEMENT BY APPLICANT				APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
				FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
				APPLICANT: Hutcherson et al.	
				GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey
Sheet	7	of	11		

/AMG/		GALLICHAN et al., Specific secretory immune responses in the female genital tract following intranasal immunization with a recombinant adenovirus expressing glycoprotein B of herpes simplex virus. Vaccine. 1995 Nov;13(16):1589-95.	
		GEISSLER et al., Enhancement of cellular and humoral immune responses to hepatitis C virus core protein using DNA-based vaccines augmented with cytokine-expressing plasmids. J Immunol. 1997 Feb 1;158(3):1231-7.	
		HAHM et al., Efficacy of polyadenylic.polyuridylic acid in the treatment of chronic active hepatitis B. Int J Immunopharmacol. 1994 Mar;16(3):217-25.	
		HALPERN et al., In vitro inhibition of murine IFN gamma production by phosphorothioate deoxyguanosine oligomers. Immunopharmacology. 1995 Feb;29(1):47-52.	
		HARRINGTON et al., Adjuvant effects of low doses of a nuclease-resistant derivative of polyinosinic acid . polycytidylic acid on antibody responses of monkeys to inactivated Venezuelan equine encephalomyelitis virus vaccine. Infect Immun. 1979 Apr;24(1):160-6.	
		HIGAKI et al., Mechanisms involved in the inhibition of growth of a human B lymphoma cell line, B104, by anti-MHC class II antibodies. Immunol Cell Biol. 1994 Jun;72(3):205-14.	
		HINKULA et al., Recognition of prominent viral epitopes induced by immunization with human immunodeficiency virus type 1 regulatory genes. J Virol. 1997 Jul;71(7):5528-39.	
		HOLMGREN et al., Mucosal adjuvants and anti-infection and anti-immunopathology vaccines based on cholera toxin; cholera toxin B subunit and CpG DNA. Expert Rev Vaccines. 2003 Apr;2(2):205-17.	
		HUGHES et al., Influence of base composition on membrane binding and cellular uptake of 10-mer phosphorothioate oligonucleotides in Chinese hamster ovary (CHRC5) cells. Antisense Res Dev. 1994 Fall;4(3):211-5.	
		JIANG et al., Enhancing immunogenicity by CpG DNA. Curr Opin Mol Ther. 2003 Apr;5(2):180-5.	
		JOHNSON et al., Non-specific resistance against microbial infections induced by polyribonucleotide complexes. In: Immunopharmacology of infection diseases: Vaccine adjuvants and modulators of non-specific resistance. 1987; 291-301.	
		KERN et al., Herpesvirus hominis infection in newborn mice: treatment with interferon inducer polyinosinic-polycytidylic acid. Antimicrob Agents Chemother. 1975 Jun;7(6):793-800.	
		KRIEG et al., Lymphocyte activation mediated by oligodeoxynucleotides or DNA containing novel un-methylated CpG motifs. American College of Rheumatology 58 th National Scientific Meeting. Minneapolis, Minnesota, October 22, 1994. Abstracts. Arthritis Rheum. 1994 Sep;37(9 Suppl).	
		KRIEG et al., Applications of immune stimulatory CpG DNA for antigen-specific and antigen-nonspecific cancer immunotherapy. Eur J Canc. 1999 Oct; 35/Suppl4:S10. Abstract #14.	
		KRIEG et al., Causing a commotion in the blood: immunotherapy progresses from bacteria to bacterial DNA. Immunol Today. 2000 Oct;21(10):521-6.	
		KRIEG et al., Chapter 8: Immune Stimulation by Oligonucleotides. in Antisense Research and Application. Crooke, editor. 1998; 243-62.	
✓		KRIEG et al., 1996 Meeting on Molecular Approaches to the Control of Infectious Diseases. Cold Spring Harbor Laboratory, September 9-13, 1996: 116.	
/AMG/		KRIEG et al., Enhancing vaccines with immune stimulatory CpG DNA. Curr Opin Mol Ther. 2001 Feb;3(1):15-24.	

EXAMINER: /Anne Gussow/	DATE CONSIDERED: 05/03/2007
--------------------------------	------------------------------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	8	of	11
-------	---	----	----

/AMG/		KRIEG et al., Chapter 7: CpG oligonucleotides as immune adjuvants. Ernst Schering Research Found Workshop 2001; 30:105-18.	
		KRIEG, Immune effects and mechanisms of action of CpG motifs. Vaccine. 2000 Nov 8;19(6):618-22.	
		KRIEG et al., Chapter 17: Immune stimulation by oligonucleotides. in Antisense Drug Tech. 2001;1394:471-515.	
		KRIEG et al., Mechanisms and applications of immune stimulatory CpG oligodeoxynucleotides. Biochim Biophys Acta. 1999 Dec 10;1489(1):107-16.	
		KRIEG et al., The CpG motif: Implications for clinical immunology. BioDrugs. 1998 Nov 1;10(5):341-6.	
		KRIEG, The role of CpG motifs in innate immunity. Curr Opin Immunol. 2000 Feb;12(1):35-43.	
		KRIEG et al., Mechanism of action of CpG DNA. Curr Top Microbiol Immunol. 2000;247:1-21.	
		KRIEG et al., Mechanisms and therapeutic applications of immune stimulatory CpG DNA. Pharmacol Ther. 1999 Nov;84(2):113-20.	
		KRIEG et al., Sequence motifs in adenoviral DNA block immune activation by stimulatory CpG motifs. Proc Natl Acad Sci U S A. 1998 Oct 13;95(21):12631-6.	
		KRIEG et al., CpG DNA induces sustained IL-12 expression in vivo and resistance to Listeria monocytogenes challenge. J Immunol. 1998 Sep 1;161(5):2428-34.	
		KRIEG et al., CpG DNA: a novel immunomodulator. Trends Microbiol. 1999 Feb;7(2):64-5.	
		KRIEG, Signal transduction induced by immunostimulatory CpG DNA. Springer Semin Immunopathol. 2000;22(1-2):97-105.	
		KRIEG et al., Unmethylated CpG DNA protects mice from lethal listeria monocytogenes challenge. Vaccines. 1997; 97:77-9.	
		KRIEG et al., Infection. In McGraw Hill Book. 1996: 242-3.	
		KRIEG et al., Lymphocyte activation by CpG dinucleotide motifs in prokaryotic DNA. Trends Microbiol. 1996 Feb;4(2):73-6.	
		KROWN et al., Phase I trial with the interferon inducer polyI/poly-I-lysine (Poly ICL). Journal of Interferon Research. 1983; 3:281-90.	
		KULKARNI et al., Effect of dietary nucleotides on response to bacterial infections. JPEN J Parenter Enteral Nutr. 1986 Mar-Apr;10(2):169-71.	
		KURAMOTO et al., Induction of T-cell-mediated immunity against MethA fibrosarcoma by intratumoral injections of a bacillus Calmette-Guerin nucleic acid fraction. Cancer Immunol Immunother. 1992;34(5):283-8.	
		KURAMOTO et al., Changes of host cell infiltration into Meth A fibrosarcoma tumor during the course of regression induced by injections of a BCG nucleic acid fraction. Int J Immunopharmacol. 1992 Jul;14(5):773-82.	
✓		KURAMOTO et al., In situ infiltration of natural killer-like cells induced by intradermal injection of the nucleic acid fraction from BCG. Microbiol Immunol. 1989;33(11):929-40.	
/AMG/		LEE et al., An oligonucleotide blocks interferon-gamma signal transduction. Transplantation. 1996 Nov 15;62(9):1297-301.	

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141

ATTY. DOCKET NO.: C1037.70049US00

FILING DATE: August 18, 2003

CONFIRMATION NO.: 3287

APPLICANT: Hutcherson et al.

GROUP ART UNIT: 1643

EXAMINER: David Harold Humphrey

Sheet 9 of 11

/AMG/	LETSINGER et al., Cholesteryl-conjugated oligonucleotides: synthesis, properties, and activity as inhibitors of replication of human immunodeficiency virus in cell culture. Proc Natl Acad Sci U S A. 1989 Sep;86(17):6553-6.	
	LETSINGER et al., Synthesis and properties of modified oligonucleotides. Nucleic Acids Symp Ser. 1991;(24):75-8.	
	LEVINE et al., Phase I-II trials of poly IC stabilized with poly-L-lysine. Cancer Treat Rep. 1978 Nov;62(11):1907-12.	
	LEVY et al., Prophylactic control of simian hemorrhagic fever in monkeys by an interferon inducer, polyribonucleoside-polyribocytidylic acid-poly-L-lysine. J Infect Dis. 1976 Jun;133 Suppl:A256-9.	
	LIPFORD et al., CpG-containing synthetic oligonucleotides promote B and cytotoxic T cell responses to protein antigen: a new class of vaccine adjuvants. Eur J Immunol. 1997 Sep;27(9):2340-4.	
	LIPFORD et al., Immunostimulatory DNA: sequence-dependent production of potentially harmful or useful cytokines. Eur J Immunol. 1997 Dec;27(12):3420-6.	
	LIU et al., Recombinant interleukin-6 protects mice against experimental bacterial infection. Infect Immun. 1992 Oct;60(10):4402-6.	
	LIU et al., CpG ODN is an effective adjuvant in immunization with tumor antigen. J Invest Med. 1997 Sept;45(7):333A.	
	MACAYA et al., Thrombin-binding DNA aptamer forms a unimolecular quadruplex structure in solution. Proc Natl Acad Sci U S A. 1993 Apr 15;90(8):3745-9.	
	MACFARLANE et al., Unmethylated CpG-containing oligodeoxynucleotides inhibit apoptosis in WEHI 231 B lymphocytes induced by several agents: evidence for blockade of apoptosis at a distal signalling step. Immunology. 1997 Aug;91(4):586-93.	
	MANCILLA-RAMIREZ et al., [Phosphatidylcholine induces an increase in the production of interleukin-6 and improves survival of rats with neonatal sepsis caused by Klebsiella pneumoniae] Gac Med Mex. 1995 Jan-Feb;131(1):14-22.	Y-Abstract
	MATSON et al., Nonspecific suppression of [3H]thymidine incorporation by "control" oligonucleotides. Antisense Res Dev. 1992 Winter;2(4):325-30.	
	MICHELSON et al. Poly(A).poly(U) as adjuvant in cancer treatment distribution and pharmacokinetics in rabbits. Proc Soc Exp Biol Med. 1985 Jun;179(2):180-6.	
	MONTEITH et al., Immune stimulation—a class effect of phosphorothioate oligodeoxynucleotides in rodents. Anticancer Drug Des. 1997 Jul;12(5):421-32.	
	MUHLHAUSER et al., VEGF165 expressed by a replication-deficient recombinant adenovirus vector induces angiogenesis in vivo. Circ Res. 1995 Dec;77(6):1077-86.	
	OCHIAI et al., Studies on lymphocyte subsets of regional lymph nodes after endoscopic injection of biological response modifiers in gastric cancer patients. Int J Immunotherapy. 1986;11(4):259-65.	
	PARK et al. Adjuvant effect of polyadenylic.polyuridylic acid on antibody production of recombinant hepatitis B surface antigen in mice. Int J Immunopharmacol. 1995 Jun;17(6):513-6.	
	PENG et al., Toll-like receptor 8-mediated reversal of CD4+ regulatory T cell function. Science. 2005 Aug 26;309(5739):1380-4.	
↓ /AMG/	PERLAKY et al., Growth inhibition of human tumor cell lines by antisense oligonucleotides designed to inhibit p120 expression. Anticancer Drug Des. 1993 Feb;8(1):3-14.	

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	10	of	11
-------	----	----	----

/AMG/		PISETSKY et al., Immunological properties of bacterial DNA. Ann N Y Acad Sci. 1995 Nov 27;772:152-63.	
		PISETSKY, The influence of base sequence on the immunostimulatory properties of DNA. Immunol Res. 1999;19(1):35-46.	
		RAMANATHAN et al., Characterization of the oligodeoxynucleotide-mediated inhibition of interferon-gamma-induced major histocompatibility complex class I and intercellular adhesion molecule-1. J Biol Chem. 1994 Oct 7;269(40):24564-74.	
		RAMANATHAN et al., Inhibition of interferon-gamma-induced major histocompatibility complex class I expression by certain oligodeoxynucleotides. Transplantation. 1994 Feb 27;57(4):612-5.	
		RATAJCZAK et al., In vivo treatment of human leukemia in a scid mouse model with c-myb antisense oligodeoxynucleotides. Proc Natl Acad Sci U S A. 1992 Dec 15;89(24):11823-7.	
		RAZ et al., Potential role of immunostimulatory DNA sequences (ISS) in genetic immunization and autoimmunity. ACR Poster Session C: Cytokines and Inflammatory Mediators. 1996 Oct 20; Abstract Number 615.	
		SEDEGAH et al., Interleukin 12 induction of interferon gamma-dependent protection against malaria. Proc Natl Acad Sci U S A. 1994 Oct 25;91(22):10700-2.	
		SJOLANDER et al., Kinetics, localization and isotype profile of antibody responses to immune stimulating complexes (iscoms) containing human influenza virus envelope glycoproteins. Scand J Immunol. 1996 Feb;43(2):164-72.	
		SPARWASSER et al., Bacterial DNA causes septic shock. Nature. 1997 Mar 27;386(6623):336-7.	
		STEIN et al., Problems in interpretation of data derived from in vitro and in vivo use of antisense oligodeoxynucleotides. Antisense Res Dev. 1994 Summer;4(2):67-9.	
		STEIN et al., Physicochemical properties of phosphorothioate oligodeoxynucleotides. Nucleic Acids Res. 1988 Apr 25;16(8):3209-21.	
		STEIN et al., Non-antisense effects of oligodeoxynucleotides. Antisense Technology. 1997; ch11: 241-64.	
		STEIN et al., Antisense oligonucleotides as therapeutic agents--is the bullet really magical? Science. 1993 Aug 20;261(5124):1004-12.	
		STEIN et al., Problems in interpretation of data derived from in vitro and in vivo use of antisense oligodeoxynucleotides. Antisense Res Dev. 1994 Summer;4(2):67-9.	
		SUN et al., Mitogenicity of DNA from different organisms for murine B cells. J Immunol. 1997 Oct 1;159(7):3119-25.	
		TAKATSUKI et al., Interleukin 6 perfusion stimulates reconstitution of the immune and hematopoietic systems after 5-fluorouracil treatment. Cancer Res. 1990 May 15;50(10):2885-90.	
		TOMAI et al., Immunomodulating and antiviral activities of the imidazoquinoline S-28463. Antiviral Res. 1995 Nov;28(3):253-64.	
		TRACEY et al., Mechanisms of immunostimulation by pyrimidinones. In: Immunopharmacology of infectious diseases. 1987: 279-89.	
		WAAG et al., Injection of inactivated phase I Coxiella burnetii increases non-specific resistance to infection and stimulates lymphokine production in mice. Ann N Y Acad Sci. 1990;590:203-14.	
↓ /AMG/		WANG et al., A comparison of guanosine-quartet inhibitory effects versus cytidine homopolymer inhibitory effects on rat neointimal formation. Antisense Nucleic Acid Drug Dev. 1998 Jun;8(3):227-36.	

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

APPLICATION NO.: 10/643,141	ATTY. DOCKET NO.: C1037.70049US00
FILING DATE: August 18, 2003	CONFIRMATION NO.: 3287
APPLICANT: Hutcherson et al.	
GROUP ART UNIT: 1643	EXAMINER: David Harold Humphrey

Sheet	11	of	11
-------	----	----	----

/AMG/		WANG et al., Synergy between CpG- or non-CpG DNA and specific antigen for B cell activation. Int Immunol. 2003 Feb;15(2):223-31.	
		WEINER et al., Immunostimulatory oligodeoxynucleotides containing the CpG motif are effective as immune adjuvants in tumor antigen immunization. Proc Natl Acad Sci U S A. 1997 Sep 30;94(20):10833-7.	
		WOOLDRIDGE et al., Select unmethylated CpG oligodeoxynucleotide improve antibody dependent cellular cytotoxicity in vitro and in vivo. Proc Am Assoc Cancer Res. 1996 Mar;37(3253):477.	
		WOOLDRIDGE et al., Immunostimulatory oligodeoxynucleotides containing CpG motifs enhance the efficacy of monoclonal antibody therapy of lymphoma. Blood. 1997 Apr 15;89(8):2994-8.	
		WYATT et al. Combinatorially selected guanosine-quartet structure is a potent inhibitor of human immunodeficiency virus envelope-mediated cell fusion. Proc Natl Acad Sci U S A. 1994 Feb 15;91(4):1356-60.	
↓		ZHAO et al., Pattern and kinetics of cytokine production following administration of phosphorothioate oligonucleotides in mice. Antisense Nucleic Acid Drug Dev. 1997 Oct;7(5):495-502.	
/AMG/		ZIMMERMANN et al., CpG oligodeoxynucleotides trigger protective and curative Th1 responses in lethal murine leishmaniasis. J Immunol. 1998 Apr 15;160(8):3627-30.	

a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. __, filed __, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

NOTE - No copies of U.S. patents, published U.S. patent applications, or pending, unpublished patent applications stored in the USPTO's Image File Wrapper (IFW) system, are included. See 37 CFR §1.98 and 1287OG163. Copies of all other patent(s), publication(s), unpublished, pending U.S. patent applications, or other information listed are provided as required by 37 CFR §1.98 unless 1) such copies were provided in an IDS in an earlier application that complies with 37 CFR §1.98, and 2) the earlier application is relied upon for an earlier filing date under 35 U.S.C. §120.]

EXAMINER:

/Anne Gussow/

DATE CONSIDERED:

05/03/2007

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.